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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,042	03/17/2004	Gerard Hillion	PET-2132	3470

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EXAMINER

PRICE, ELVIS O

ART UNIT	PAPER NUMBER
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1621

MAIL DATE	DELIVERY MODE
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05/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,042	Applicant(s) HILLION ET AL.	
	Examiner Elvis O. Price	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 4-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 4-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 2 and 4-15 are pending in the application, claim 3 having been canceled and claim 15 having been added by the amendment filed 2/16/07.
2. The amendment, filed 2/16/07, has overcome the 35 USC 102(b) rejection issued in the Office Action dated 10/16/06.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 and 4-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brunner et al. (WO 02/46339; see US Pat. Equivalent 6,960,673 B2), in view of Gutsche et al. (US Pat. 6,245,727).

Brunner et al. teach a process for the alcoholysis of a vegetable or animal oil having natural free acidity, (1) comprising catalytically reacting said oil with a lower alcohol, (2) removing excess alcohol, followed by (3) a second transesterification

reaction with additional alcohol and separating glycerol and excess alcohol (see Cols. 3-5 and Example). The difference between the presently claimed invention and what is taught by the Brunner et al. reference is that Brunner et al. do not teach carrying out the catalytic transesterification in the presence of a heterogeneous fixed bed catalyst and using a zinc aluminate mixed oxide catalyst.

However, Gutsche et al. teach that esterification and/or transesterification reactions can be performed using heterogeneous fixed bed catalyst system and suitable catalysts are any solid catalyst including basic, acidic, organic, inorganic, cation/anion exchangers, acidic aluminas and zeolites (see Cols. 1, 3 and 4).

It would have been *prima facie* obvious to one having ordinary skill in the art, in view of the teachings in the Brunner et al. and Gutsche et al. references, to transesterify fatty oils as presently claimed because Brunner et al. teach a similar process for the alcoholysis/transesterification of a vegetable or animal oil having natural free acidity and Gutsche et al. teach that a heterogeneous fixed bed catalyst, employing any suitable solid catalyst, can be used in esterification and/or transesterification reactions.

One having ordinary skill in the art would have been motivated to implement a heterogeneous fixed bed catalyst (inclusive of zinc aluminate oxide catalyst), as taught by Gutsche et al., into the Brunner et al. fatty oil esterification process because a heterogeneous fixed bed catalyst is recognized in the art (as taught by Gutsche et al.; Col. 1, lines 59-64) as being relatively convenient for usage when considering that there is no need to filter off a solid catalyst or to wash out a homogeneous catalyst from the

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product mixture. The instantly claimed invention would have been therefore obvious to one having ordinary skill in the art.

Response to Arguments

Applicant's arguments filed 2/16/07 have been fully considered but they are not persuasive.

Applicants argue that the Brunner et al. reference discloses only a homogeneous catalysis process and the transesterification of vegetable or animal oils is not performed simultaneously with the esterification of the free acidity of the oils.

This argument is not persuasive because the Examiner has applied the Gutsche et al. reference to remedy the heterogeneous catalysis process, which is not taught by Brunner et al. Since Brunner et al. are carrying out the same material transesterification of vegetable or animal oils, it would not be unreasonable for one having ordinary skill in the art to expect that the free acidity of the oils would be simultaneously esterified.

Applicants argue that although the Gutsche et al. reference teaches a process which can be used for heterogeneous catalyzed esterification or transesterification reactions, it is not specified that the Gutsche et al. process could be used for vegetable or animal oils having a natural free acidity, which, as is generally known, disrupts the transesterification reaction.

This argument is not convincing because esterification of vegetable or animal oils is a very common placed reaction that is conducted in the art. In fact, Gutsche et al. conduct an esterification of a fatty acid (hexadecanoic acid), which is typically obtained from vegetable oil, utilizing their heterogeneous catalyzed esterification process (see

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Example 1). Thus, it would not be unreasonable for one having ordinary skill in the art to envisage incorporating the heterogeneous catalyzed esterification process, taught by Gutsche et al., into the Brunner et al. process for the alcoholysis of a vegetable or animal oil having natural free acidity so as to arrive at the presently claimed invention.

Applicants argue that with respect to new independent claim 15, the combination of references fails to suggest conducting these two reactions simultaneously with a catalyst comprising a zinc aluminate.

This argument is not persuasive because Gutsche et al. generally teach that their heterogeneous fixed bed catalyst system and suitable catalysts consist of, inter-alia, acidic aluminas. Thus, zinc aluminate catalyst, as defined by the present claim 15, would have been in the purview of one having ordinary skill in the art.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

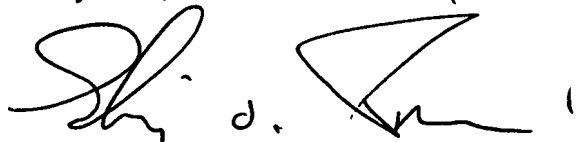
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvis O. Price whose telephone number is 571 272-0644. The examiner can normally be reached on 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on 571 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Elvis O. Price', with a stylized flourish at the end.

Elvis O. Price